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Hibury Madison & Sutor LLP
Intellectual Property Group
ninth Floor, East Tower
100 New York Avenue, N.W.
Washington, D.C. 20006 3918

Atty. Dkt. PMS 256628
M# _____ Client Ref. _____

ASSIGNMENT
of U.S. Origin Patent Application
(to Corporation)
(or Limited Partnership)

WHEREAS, the undersigned, to wit:

- 1) Andrew Fire
- 2) Si Q. Xu
- 3) Mary K. Montgomery
- 4) Stephen A. Kostas
- 5) Lisa Timmons

(hereinafter collectively ASSIGNOR), has/have made an invention known as Dkt. PMS 256628
and entitled: Genetic Inhibition by Double-Stranded RNA
for which an application for Letters Patent of the United States

- ☐ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;
☒ was filed on December 18, 1998, Appln. No. 09/ 215, 257 ;

AND WHEREAS The Carnegie Institution of Washington (hereinafter ASSIGNEE), ☒ a corporation ☐
Limited Partnership duly organized and existing under the laws of the District of Columbia and having its
principal office and place of business at 1530 P Street, N.W., Washington, DC 20005, desires to acquire an
interest therein;

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and other good and valuable consideration,
the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign
and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title
and interest to the said invention in the United States and all foreign countries, as described in the aforesaid
application, and to the said application and to all continuations, divisions, reissues and substitutes of said
application, together with the right of priority under the International Convention for the Protection of Industrial
Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other
international agreements to which the United States of America adheres, and ASSIGNOR hereby authorizes and
requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE,
its successors, assigns and legal representatives.

PAT-1140 (1/97)

TO 14016#56816502# P.01

JUL 02 2003 12:46 PM FR

AND ASSIGNOR hereby agrees to execute any papers requested by ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

ASSIGNOR furthermore agrees upon request of said ASSIGNEE, and without further remuneration, to execute any and all papers desired by said ASSIGNEE for the filing and granting of foreign applications and the perfecting of title thereto in said ASSIGNEE.

NOTE: The undersigned hereby authorizes Pillsbury Madison & Sutro LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

<u>Signature</u>	<u>Date Signed</u>	<u>Witness</u>
1) x <u>Andrew Fire</u> Name: Andrew Fire	x <u>11/15/99</u>	<u>Philip L. Engle</u> <u>Linda A. Henry</u>
2) _____ Name: Si Q. Xu	_____	_____
3) _____ Name: Mary K. Montgomery	_____	_____
4) _____ Name: Stephen A. Kostas	_____	_____
5) _____ Name: Lisa Timmons	_____	_____

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Pillsbury Madison & Sutro LLP
Intellectual Property Group
Ninth Floor, East Tower
1100 New York Avenue, N.W.
Washington, D.C. 20005-3018

Atty. Dkt.	PMS 256628	Client Ref.
	M#	

ASSIGNMENT
of U.S. Origin Patent Application
(to Corporation)
(or Limited Partnership)

WHEREAS, the undersigned, to wit:

- 1) Andrew Fire
- 2) ~~Shen~~ Signu Xu
- 3) Mary K. Montgomery
- 4) Stephen A. Kostas
- 5) Lisa Timmons

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and entitled: Genetic Inhibition by Double-Stranded RNA

for which an application for Letters Patent of the United States

☐ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;

☒ was filed on December 18, 1998, Appln. No 09/ 215,257

AND WHEREAS The Carnegie Institution of Washington (hereinafter ASSIGNEE), ☒ a corporation ☐ Limited Partnership duly organized and existing under the laws of the District of Columbia and having its principal office and place of business at 1530 P Street, N.W., Washington, DC 20005, desires to acquire an interest therein;

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title and interest to the said invention in the United States and all foreign countries, as described in the aforesaid application, and to the said application and to all continuations, divisions, reissues and substitutes of said application, together with the right of priority under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other International agreements to which the United States of America adheres, and ASSIGNOR hereby authorizes and requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives.

PAT-114B (1/97)

TO 14016#56816502# P.03



JUL 02 2003 12:47 AM FR

AND ASSIGNOR hereby agrees to execute any papers requested by ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

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<u>Signature</u>	<u>Date Signed</u>	<u>Witness</u>
1) _____ Name: Andrew Fire	_____	_____
2)  _____ Name: Sr Q. Xu Siquan	X 1/12/99	X  Hui Shan
3) _____ Name: Mary K. Montgomery	_____	_____
4) _____ Name: Stephen A. Kostas	_____	_____
5) _____ Name: Lisa Timmons	_____	_____

PAT-1100 T1E

TO 14016#568165002# P.04

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1100 New York Avenue, N.W.
Washington, D.C. 20005-3918

Atty. Dkt. PMS 256628
Mfr Client Ref.

**ASSIGNMENT
of U.S. Origin Patent Application
(to Corporation)
(or Limited Partnership)**

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- 2) Si Q. Xu
- 3) Mary K. Montgomery
- 4) Stephen A. Kostas
- 5) Lisa Timmons

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international agreements to which the United States of America adheres, and ASSIGNOR hereby authorizes and
requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE,
its successors, assigns and legal representatives.

TO 14016#56818502# P.05

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<u>Signature</u>	<u>Date Signed</u>	<u>Witness</u>
1) _____ Name: Andrew Fire	_____	_____
2) _____ Name: Si Q. Xu	_____	_____
3) <u>X Mary K. Montgomery</u> Name: Mary K. Montgomery	<u>X 1/29/99</u>	<u>X Patricia Bygones</u> <u>X 1-29-99</u>
4) _____ Name: Stephen A. Kostas	_____	_____
5) _____ Name: Lisa Timmons	_____	_____

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 Ninth Floor, East Tower
 1100 New York Avenue, N.W.
 Washington, D.C. 20005-3918

Atty. Dkt. PMS 258628
 M#

Client Ref.

ASSIGNMENT
of U.S. Origin Patent Application
(to Corporation)
(or Limited Partnership)

WHEREAS, the undersigned, to wit:

- 1) Andrew Fire
- 2) Si Q. Xu
- 3) Mary K. Montgomery
- 4) Stephen A. Kostas
- 5) Lisa Timmons

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1) _____ Name: Andrew Fire	_____	_____
2) _____ Name: Si Q. Xu	_____	_____
3) _____ Name: Mary K. Montgomery	_____	_____
4) <u>Stephen A. Kostas</u> Name: Stephen A. Kostas	<u>Jan. 20, 1999</u>	<u>Patricia L. England</u> <u>Patricia L. England</u>
5) _____ Name: Lisa Timmons	_____	_____

PAT-1118 11/97

TO 14016#568165002# P.08

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requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE,
its successors, assigns and legal representatives.

PAT-1106 11/97

TO 1401655816502# P.09

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Signature

Date Signed

Witness

1)

Name: Andrew Fire

2)

Name: Si Q. Xu

3)

Name: Mary K. Montgomery

4)

Name: Stephen A. Kostas

5)

x Lisa D. Timmons
Name: Lisa Timmons

x 1/22/00

x [Signature]
x [Signature]

PAT-1146 11/97